

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION OF : IMHOF, Martin  
TITLE : JOINT SOCKET FOR A HIP ENDOPROSTHESIS  
SERIAL NO. : 10/596,752  
FILING DATE : December 8, 2008  
EXAMINER : HOFFMAN, M.  
ART UNIT : 3774  
CONFIRMATION NO. : 1141

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

M.S. Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

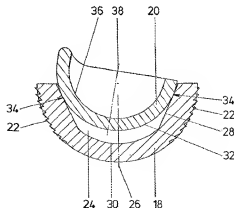
Dear Sirs:

In response to the Office Action dated October 22, 2010 issued in connection with the above-referenced patent application ("subject application"), Applicant respectfully requests a Pre-Appeal Review according to the procedures identified in the Patent and Trademark Office notice of July 12, 2005. The three-month shortened statutory period in which to respond to the Office Action expires on January 22, 2011. Accordingly, this Request is timely filed.

Applicant submits that the Office Action issued by the United States Patent and Trademark Office ("the Office") lacks a prima facie case for rejection, for the reasons below.

**Background**

The claimed invention is directed to a joint socket for a hip endoprosthesis having a socket shell and a socket insert. An exemplary socket shell 18 and socket insert 20 are shown in Figure 2, at right.



### **Objection to Claim 12**

The Office objected to claim 12 as inconsistent with claim 5. Applicant respectfully disagrees. Claim 5 recites “the socket insert [is] coupleable in a self-locking manner within said accommodating space [of the socket shell] along said line of contact.” Nothing in this language requires the socket insert to self-lock immediately upon contact with socket shell. Therefore, claim 12’s recitation that “the joint socket and the joint insert are configured to allow free rotation and tilting of the insert in the socket shell when the insert and shell are in contact with each other along said line of contact” is consistent with claim 5. When taken together, this language allows for initial contact, with free rotation and tilting of the insert, followed by a self-locking coupling along the line of contact after the orientation has been selected.

This claim language is consistent with the description in the specification at p. 5, lines 10–14 and 21–24, which explains that the insert comes into contact with the shell, and can then be “rotated at will” and “tilted at will” until it is in a desired position. After the initial contact and adjustment has been made, the socket insert is then “pressed axially into the accommodating space 24 so that it is clamped in a self-retaining manner in that orientation position.”

### **35 U.S.C. § 112, ¶ 2 Rejections**

The Office rejected claims 6 and 21 under 35 U.S.C. § 112, ¶ 2, asserting that it was unclear whether “an infinite radius of curvature” is the same as “a radius of curvature” recited in claims 5 and 19. However, the MPEP states: “[t]he test for definiteness under 35 U.S.C. 112, second paragraph, is whether ‘those skilled in the art would understand what is claimed when the claim is read in light of the specification.’” (MPEP § 2173.02, citations omitted) Claim 5 recites “a radius of curvature of the taper of the inner surface of the socket shell in the region of said line of a contact.” Claim 6 further recites “the inner surface has a conical shape and defines an infinite radius of curvature in the region of said line of contact.” One skilled in the art would recognize that claim 6 clearly refers to the same region of the same surface of the same claimed socket shell, and adds that the radius of curvature is an infinite radius of curvature. Claims 19 and 21 use similar language. Accordingly, claims 6 and 21 meet the standard of § 112, ¶ 2.

The Office rejected claims 5, 19, and 34 under 35 U.S.C. § 112, ¶ 2, asserting that “a radius of curvature” was not disclosed in the specification. Applicant respectfully disagrees.

First, the Office appears to apply a written description requirement that is not required by § 112, ¶ 2. A “radius of curvature” encompasses an infinite radius of curvature (*i.e.*, a straight line). An infinite radius of curvature is shown at reference numeral 28 in Figure 2. Moreover, in the Summary of the Invention, the specification broadly discusses an inner surface of the socket shell. This description encompasses both straight and curved surfaces. For at least these reasons, Applicant submits that claims 5, 19, and 34 meet the standard of § 112, ¶ 2.

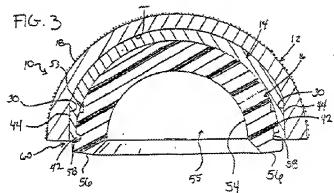
The Office rejected claim 12 under § 112, ¶ 2, mirroring its objection to claim 12. Applicant reasserts its arguments above, and requests this rejection be withdrawn.

### **35 U.S.C. § 102(b) Rejection of Claims 5–10, 12, 14–17, and 19–35**

The Office rejected claims 5–10, 12, 14–17 and 19–35 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent Application Publication No. 2002/0068980 to Serbousek (“Serbousek”). Applicant respectfully traverses this rejection.

First, independent claim 5 recites “the socket insert [is] coupleable in a self-locking manner within said accommodating space along *said line of contact*.” (Emphasis added.) Accordingly, the “line of contact” does not include lines of incidental contact that occur during the insertion or removal of the insert, but is a line of contact at which self-locking may occur.

Claim 5 further recites “a radius of curvature of the taper of the inner surface of the socket shell in the region of said line of contact is *greater* than the spherical radius of the outer surface of said socket insert *at said line of contact* when the shell and insert are in contact with each other.” (Emphasis added.) The Office offers



multiple interpretations of Serbousek, but none teach this element. Serbousek teaches only that tapers 30,44 of shell 12 and liner 14 may be self-locking. (¶ [0035].) The spherical portions (shown in Figure 3, above) are not. Therefore, even if contact occurs between the spherical portions of shell 12 and liner 14, this contact would not be a “line of contact” as recited by claim 5. Figures 3–4 show straight tapers, which both have the same radius of curvature (*i.e.*, infinity). In ¶ [0034], Serbousek states that curved tapers may be used, but notes that “[i]f taper 44 of

outside surface 32 of liner 14 is straight, taper 30 of side wall 26 of shell 12 is also straight.” Serbousek fails to disclose any self-locking tapers, where the radius of curvature of the shell is greater than the radius of curvature of the insert at the line of contact. Because Serbousek fails to disclose each and every element of claim 5 and its dependent claims 6–10, 12, 14–17, 26, and 28, Applicant respectfully requests that the anticipation rejection of these claims be withdrawn.

Independent claim 19 recites “the inner surface of the socket shell tapers toward a pole of the shell in a region on either side of said line of contact in such a manner that a radius of curvature in the region is greater than the spherical radius of the outer surface of said socket insert.” Serbousek fails to disclose a shell having a radius of curvature greater than the spherical radius of the outer surface of the socket insert in such a region, for the reasons addressed above with respect to claim 5. Therefore, Applicant respectfully requests that the anticipation rejection of claim 19 and its dependent claims 20–25, 27, and 29 be withdrawn.

Independent claim 30 recites a socket shell having an inner surface “in the form of a straight circular cone.” Claim 30 further recites a socket insert with an outer surface that “is spherically shaped at least in a region in which the outer surface of the socket insert comes into contact with the inner surface of the straight circular cone when in use.” Serbousek fails to disclose this element. In Serbousek, a straight taper contacts a straight taper, or a curved surface contacts a curved surface to form a “locking mechanical connection therebetween.” (See ¶¶ [0034]–[0035].) Serbousek does not teach a spherical shaped region of an insert contacting a straight circular cone surface of a shell. Therefore, Applicant requests that the anticipation rejection of claim 30 and its dependent claims 31–33 be withdrawn.

Independent claim 34 recites “a radius of curvature of the taper of the tapered portion surrounding the line of contact is greater than the radius of curvature of the spherically shaped region of the socket insert.” Serbousek fails to disclose this element for the same reasons discussed above with respect to claim 5. Accordingly, Applicant respectfully requests that the anticipation rejection of claim 34 and its dependent claim 35 be withdrawn.

### **35 U.S.C. § 103(a) Rejection of Claims 13 and 18**

The Office rejected claims 13 and 18 under 35 U.S.C. § 103(a) over Serbousek in view of U.S. Patent No. 4,997,447 to Shelley (“Shelley”). Claims 13 and 18 depend directly from claim 5. Serbousek fails to disclose each and every element of claim 5 for the reasons discussed above.

Shelley fails to provide these missing elements. Accordingly, the combination of Serbousek and Shelley fails to teach or suggest claims 13 and 18. Applicant respectfully requests that this obviousness rejection be withdrawn.

### **Double Patenting Rejection**

The Office provisionally rejected claims 5–25 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 9–28 of co-pending Application No. 12/296,796 (“the ‘796 application”). The subject application is the earlier filed application. The ‘796 application is currently rejected under 35 U.S.C. § 103. Per MPEP § 804:

If a “provisional” nonstatutory obviousness-type double patenting (ODP) rejection is the only rejection remaining in the earlier filed of the two pending applications, while the later-filed application is rejectable on other grounds, the examiner should withdraw that rejection and permit the earlier-filed application to issue as a patent without a terminal disclaimer.

Applicant believes this brief to overcome the rejections under 35 U.S.C. §§ 102, 103, and 112. Accordingly, the provisional nonstatutory obviousness-type double patent rejection is the only rejection remaining, and it should be withdrawn without a terminal disclaimer.

### **Conclusion**

Applicant respectfully requests a complete review of the arguments made by Applicant, withdrawal of the rejections, and an allowance of these claims. If during the Pre-Appeal review, the panel would like further clarification, the panel is invited to contact the undersigned. If any additional fees are due in connection with this Amendment, the Commissioner is authorized to charge Deposit Account No. 02-2051, specifically identifying Docket No. 27214-15.

Respectfully submitted,

Dated: January 21, 2010

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